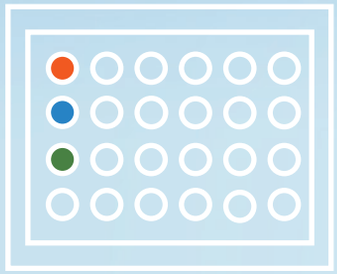
autoMACS® Pro Separator

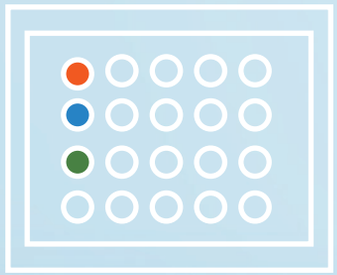
Short instructions

Load samples

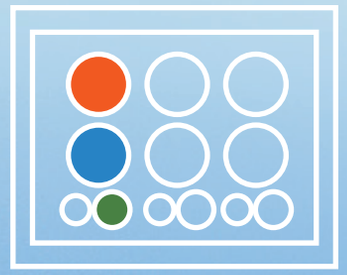
Chill 5 Rack



Chill 15 Rack



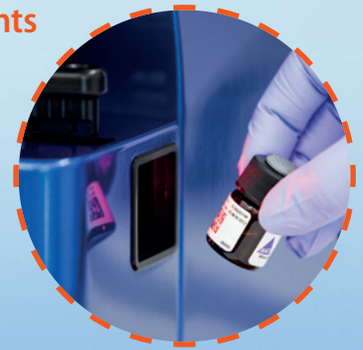
Chill 50 Rack



Touch to start up

Use the touch screen to program your cell separation procedures.

Scan reagents with the 2D barcode reader



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autoMACS® Pro Separator

Short instructions – sample labeling and separation

Enter reagents

A Go to the **Reagent** menu and highlight a reagent rack position.

B Press the **Read Reagent** button.
Present a reagent vial in front of the blinking 2D code reader.

C Enter up to four reagents.

D Save as a template if desired.

Define the separation procedure

E Go to the **Separation** menu.

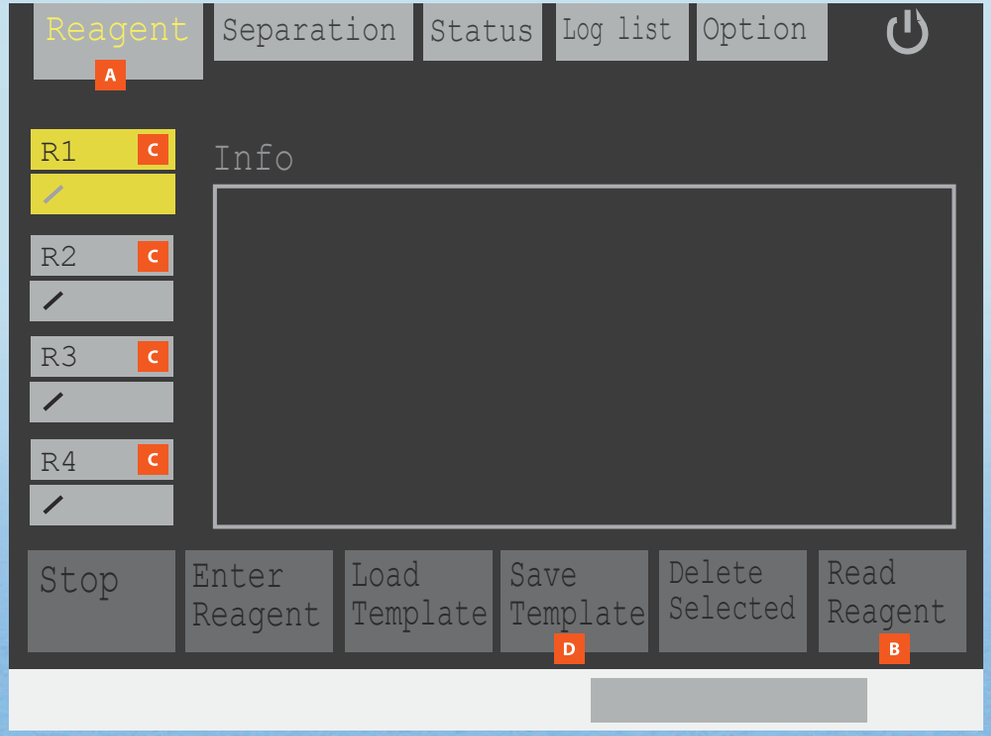
F Highlight one or more samples.

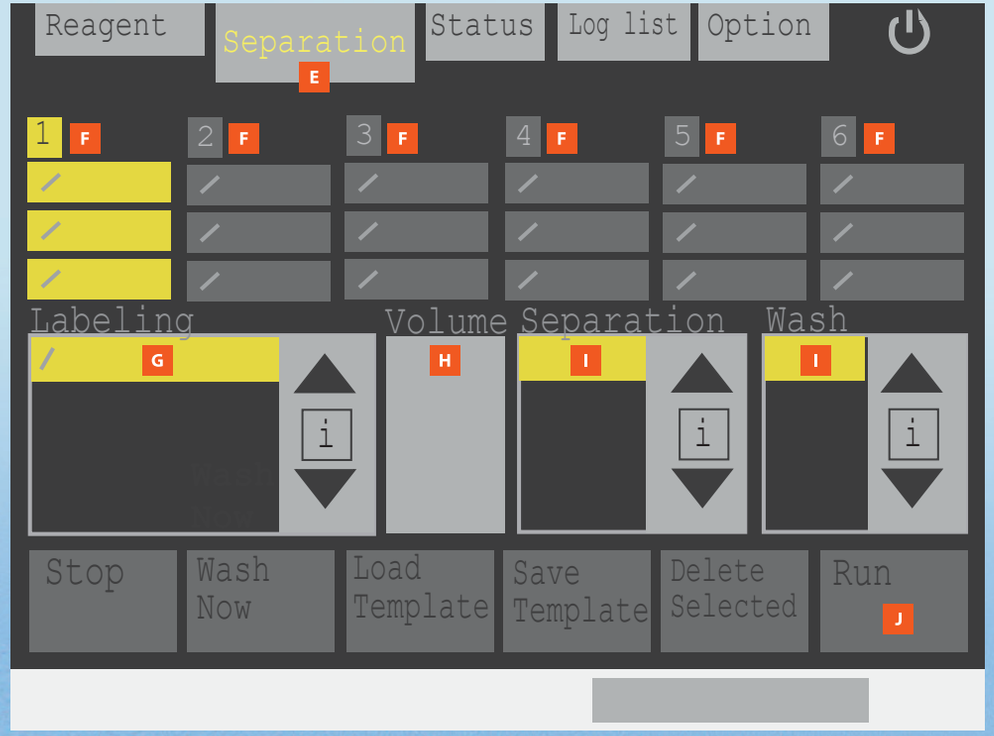
G Select the desired **Labeling** reagent.

H Touch the **Volume** submenu to enter the sample volume.

I Select a **Separation** and a **Wash** program.

J Place reagent vials and sample tubes on the respective racks and press **Run**.





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autoMACS® Pro Separator

Short instructions – maintenance

Priming

Prime the instrument after it is switched on:

1 Go to the **Separation** menu and press **Wash Now**.

2 Select **Rinse** and press **Run**.

Cleaning

Before shutting down, clean the instrument:

1 Press the shutdown button at the upper right hand corner of the screen.

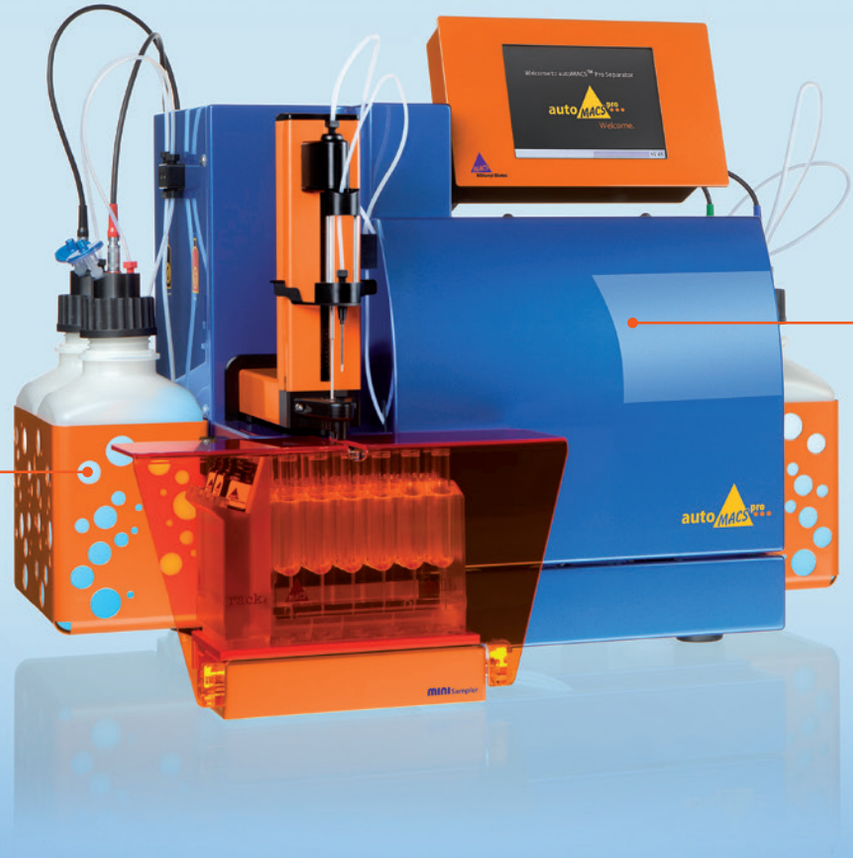
2 Select **Yes**.

3 Upon completion of the **Sleep** program, switch off the Instrument using the main power switch on the lower right side of the instrument.

Replace Fluid bottles

1 Take out an empty bottle and unscrew bottle closure counter-clockwise but do not remove it. Do not disconnect the color-coded tubing.

2 Place a fresh bottle into the holder, open it and fasten the bottle closure to the new bottle. Note the color-coding.



Column exchange

1 Open the front door.

2 Ensure that the fluid bottles are filled with solutions.

3 Go to **Option > Special > Col_ex**.

4 Press **Run**. Wait until the instrument prompts you to exchange columns.

5 Pull out the column using both hands.

6 Unscrew first bottom and then top column connector counter-clockwise.

7 Insert a fresh column and fasten it to the column connectors.

8 Press the column back into its slot until you hear a click. Repeat the whole process with column 2.

9 Press **Done**.

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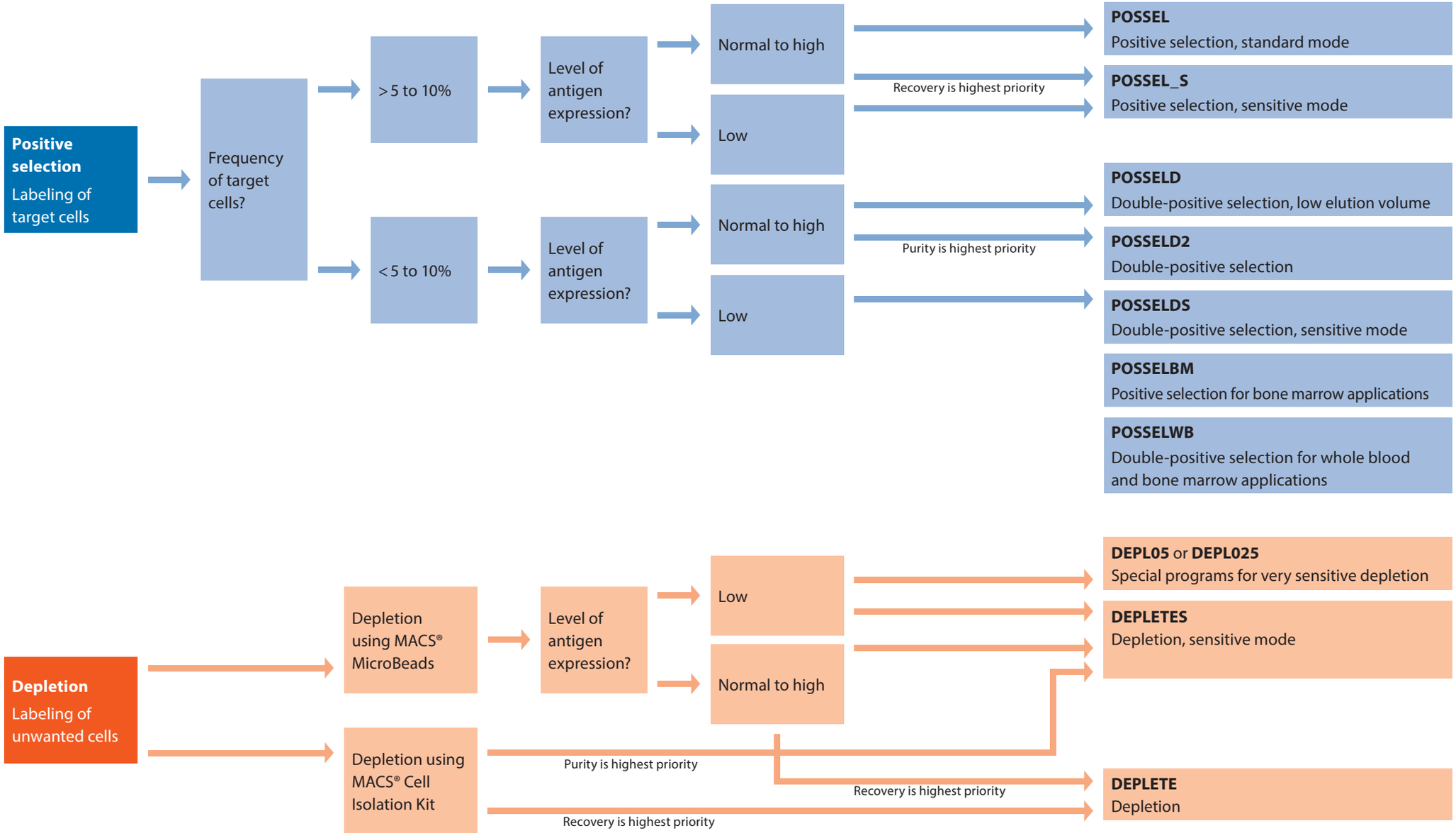
Short instructions – separation strategy



autoMACS® Pro Separator

Short instructions – sample dilution

Cell Separation Reagent	Strategy	No. of reagents	Dilution volume	Autolabeling			
				Minimal volume*	Minimal total cell number	Maximal volume	Maximal total cell number
Chill 5 Rack[1]							
Direct MicroBeads human, rat, non-human primate	Positive selection or depletion	1	10^7 cells per 80 µL	160 µL	2×10^7	1600 µL	2×10^8
Direct MicroBeads, mouse	Positive selection or depletion	1	10^7 cells per 90 µL	180 µL	2×10^7	1800 µL	2×10^8
Whole Blood MicroBeads	Whole blood or bone marrow	1	Original volume	0.25 mL		1 mL	
Cell Isolation Kits	Untouched isolation	2	10^7 cells per 40 µL	160 µL	4×10^7	800 µL	2×10^8
Cell Isolation Kits	Untouched isolation	3	10^7 cells per 30 µL	120 µL	4×10^7	600 µL	2×10^8
Chill 15 Rack[2]							
Direct MicroBeads human, rat, non-human primate	Positive selection or depletion	1	10^7 cells per 80 µL	160 µL	2×10^7	5200 µL	6.5×10^8
Direct MicroBeads, mouse	Positive selection or depletion	1	10^7 cells per 90 µL	180 µL	2×10^7	5850 µL	6.5×10^8
Whole Blood MicroBeads	Whole blood or bone marrow	1	Original volume	1 mL		4 mL	
Cell Isolation Kits	Untouched isolation	2	10^7 cells per 40 µL	160 µL	4×10^7	2600 µL	6.5×10^8
Cell Isolation Kits	Untouched isolation	3	10^7 cells per 30 µL	120 µL	4×10^7	1950 µL	6.5×10^8
Chill 50 Rack[3]							
Whole Blood MicroBeads	Whole blood or bone marrow	1	Original volume	4 mL		8 mL	

[1] Max. number of samples: 6; min. first incubation volume: 0,2 mL; max. final labeling volume: 2 mL
[2] Max. number of samples: 5; min. first incubation volume: 0,2 mL; max. final labeling volume: 6,5 mL
[3] Max. number of samples: 3; min. first incubation volume: 4 mL; max. final labeling volume: 8 mL.
* When working with fewer cells than the necessary minimal volume, resuspend cells in the stipulated minimal volume.

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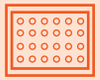
autoMACS® Pro Separator

Short instructions

Chill rack specifications

Rack type and symbol	Slots	Maximal number of samples	Manual labeling	Autolabeling	
			Maximal sample volume	Minimal first incubation volume	Maximal final labeling volume
Chill 5 	24×5 mL	6 (5 mL tubes)	2.5 mL	0.2 mL 0.25 mL*	2.0 mL 1 mL*
Chill 15 	15×15 mL 5×5 mL	5 (15 mL tubes)	12.5 mL	0.2 mL 1 mL*	6.5 mL 4 mL*
Chill 50 	6×50 mL 3×15 mL 3×5 mL	3 (50 mL tubes)	50 mL	4 mL*	8 mL*

* Volumes refer to whole blood samles only.

Buffer consumption

Program	Washing Solution	Running Buffer	Storage solution	MACS Bleach Solution	Time
Qrinse	–	48 mL	–	–	1.5 min
Rinse	96 mL	48 mL	–	–	4 min
Clean	96 mL	48 mL	48 mL	–	7 min
Sleep	96 mL	–	48 mL	–	5 min
Safe	96 mL	96 mL		40	21 min
Store	96 mL	–	96 mL	–	8 min
Col_ex	96 mL	96 mL	–	–	6 min

Daily maintenance and rinsing programs

Program	Description	Recommended usage	Duration
Qrinse	Standard short rinse of separation columns and tubing system with Running Buffer	Between separations of frequent cells (>5 %)	1.5 min
Rinse	Rinse of separation columns and tubing system with Washing Solution and Running Buffer	Prior to first separation	4 min
Clean	Rinse of Rinse of separation columns and tubing system with storage solution, Washing Solution, and Running Buffer	After whole blood and bone marrow applications.	7 min
Sleep	Rinse with Washing Solution followed by filling with storage solution	Before switching off the autoMACS Pro Separator	5 min

Periodic maintenance

Action	Description	Recommended usage	Duration
Column exchange using (**Col_ex** program)	Replacement of separation columns	Every two weeks OR after 100 separations, whichever comes first	6 min
Running the **Safe** program	Decontamination procedure with MACS Bleach Solution	Every 3–6 months	21 min
Cleaning the pump syringe	Cleaning of pump syringe (refer to user manual)	Every 1–3 months	
Running the **Store** program	Rinse with Washing Solution, followed by storage solution; replacement of columns with substitutes	Before storing the instrument for a period longer than two weeks	